

any given time. Limiting the number of threads that may be inconsistent may allow operations used to cause all threads to reach a consistent state to be bounded.

5 The steps associated with the various processes of the present invention may generally be widely varied, *e.g.*, individual steps may be altered. In addition, steps may be removed, added, and reordered without departing from the spirit or the scope of the present invention. Therefore, the present examples are to be considered as illustrative and not restrictive, and the invention is not to be limited to the details given herein, but may be modified within the scope of the appended claims.

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What is claimed is.

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In the claims:

1. A method for requesting a consistent state in a computing environment using a first thread, the computing environment including multiple threads, the multiple threads including the first thread, comprising:  
acquiring a consistent state lock using the first thread;  
identifying substantially all threads that are inconsistent, the inconsistent threads being included in the multiple threads;  
altering the state of the substantially all threads that are inconsistent to a consistent state;  
notifying the first thread when the state of the substantially all threads that are inconsistent have been altered to be consistent; and  
releasing the consistent state lock using the first thread.

2. A method as recited in claim 1 further comprising:  
performing a garbage collection after releasing the consistent state lock using the first thread.

3. A method as recited in claim 2 further comprising:  
notifying the substantially all threads that have been altered to be consistent that the garbage collection has been performed.

4. An apparatus for requesting a consistent state in a computing environment using a first thread, the computing environment including multiple threads, the multiple threads including the first thread, the method comprising:  
a means for acquiring a consistent state lock using the first thread;  
a means for identifying substantially all threads that are inconsistent, the inconsistent threads being included in the multiple threads;  
a means for altering the state of the substantially all threads that are inconsistent to a consistent state;  
a means for notifying the first thread when the state of the substantially all threads that are inconsistent have been altered to be consistent; and

a means for releasing the consistent state lock using the first thread.

5. An apparatus as recited in claim 4 further comprising:

a means for performing a garbage collection after releasing the consistent state  
5 lock using the first thread.

6. An apparatus as recited in claim 5 further comprising:

a means for notifying the substantially all threads that have been altered to be  
consistent that the garbage collection has been performed.

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7. A computer product for requesting a consistent state in a computing

environment using a first thread, the computing environment including multiple  
threads, the multiple threads including the first thread, comprising:

computer code for acquiring a consistent state lock using the first thread;  
15 computer code for identifying substantially all threads that are inconsistent,  
the inconsistent threads being included in the multiple threads;

computer code for altering the state of the substantially all threads that are  
inconsistent to a consistent state;

computer code for notifying the first thread when the state of the substantially  
20 all threads that are inconsistent have been altered to be consistent;

computer code for releasing the consistent state lock using the first thread; and  
a computer-readable medium that stores the computer codes.

8. A computer product as recited in claim 7 further comprising:

computer code for performing a garbage collection after releasing the  
25 consistent state lock using the first thread.

9. A computer product as recited in claim 8 further comprising:

computer code for notifying the substantially all threads that have been  
30 altered to be consistent that the garbage collection has been performed.